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Reducing the negative impact on the environment through organization of traffic flows considering the emissions of industrial enterprises

Suleimanov I., Mavrin G., Sokolov M., Suleimanova Y., Ardashirova L.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

© 2006-2016 Asian Research Publishing Network (ARPN).Within the research work the authors carried out analysis of the air pollution sources in the city of Naberezhnye Chelny and conducted field examinations of the traffic flow structure and density on the city highways. The highway segments with polluting agent concentrations exceeding the sanitary and hygienic standards were identified, as well as emission allowances on the polluting agents from motor vehicles were determined, considering also the emissions of industrial enterprises. To solve the problem on reducing the emissions of polluting agents to the specified level, the authors developed a simulation model that is able to consider a large number of the road network parameters. An optimization experiment was conducted that enabled to determine emission allowances through the optimization of the traffic flow speed, density and intensity.

Keywords

Atmospheric air, Emission allowances, Polluting agents, Vehicles